

DOCUMENTATION

TECHNIQUE

**REACH IN BLAST CHILLER
AND FREEZER**

BIOTRONIC TURBO
Electronic Regulation

CHILLER AND FREEZER : MI 3, MI 6, MI 10

TECHNICAL MANUAL INCLUDING
- USER MANUAL
- INSTRUCTIONS

BONNET

BONNET GRANDE CUISINE
Rue des Frères Lumière - Z.I. Mitry Compans
77292 MITRY MORY cedex
Tél. 01 60 93 70 00 - Fax. 01 60 93 70 43

USER MANUAL

REACH IN BLAST CHILLER AND FREEZER

BIOTRONIC TURBO Electronic Regulation

CHILLER AND FREEZER : MI 3, MI 6, MI 10

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IMPORTANT RECOMMENDATIONS

- * This unit is designed for use in Restaurants or Catering facilities. It is not intended for industrial use.
- * Installation should be undertaken by a refrigeration engineer.
- * Avoid installing the unit near major sources of heat or in direct sunlight.
- * Note that too high an ambient temperature can reduce performance.
- * The compressor condenser must be cleaned regularly (every 3 to 6 months) by a refrigeration engineer.
- * Do not modify the electrical connection made during installation, particularly the earth continuity circuit.
- * The supply cable that is fitted is a specific part and should only be replaced with an original part. Ensure that the plug is easily accessible.
- * In the event of problems with the electrical circuit, only the installer or the manufacturer should intervene.
- * Observe hygiene guidelines by regularly cleaning the following:
 - . interior fittings
 - . door seal
 - . interior liningDo not use corrosive or acidic products.
- * Water splashing can cause damage.
 - . To avoid the risk of splash damage, do not clean with a hose or high-pressure spray.
 - . Do not locate the unit where it is exposed to the elements.
- * Reference to the label NF FOOD HYGIENE :
Certified by : AFAQ AFNOR Certification
 11 Avenue Francis de Pressensé
 93571 SAINT DENIS LA PLAINE
 Cedex – France
- * The label NF FOOD HYGIENE complies with the NF031 requirement.
The main certified characteristics are :
 - . Cleaning qualification
 - . Refrigerating performances
- * If the installation, the use or the service is modified, the appliance will lose the right to use the label NF FOOD HYGIENE.

SPECIFICATION AND CHARACTERISTICS IN THIS DOCUMENT
MAY BE SUBJECT TO BE MODIFIED WITHOUT PRIOR NOTICE

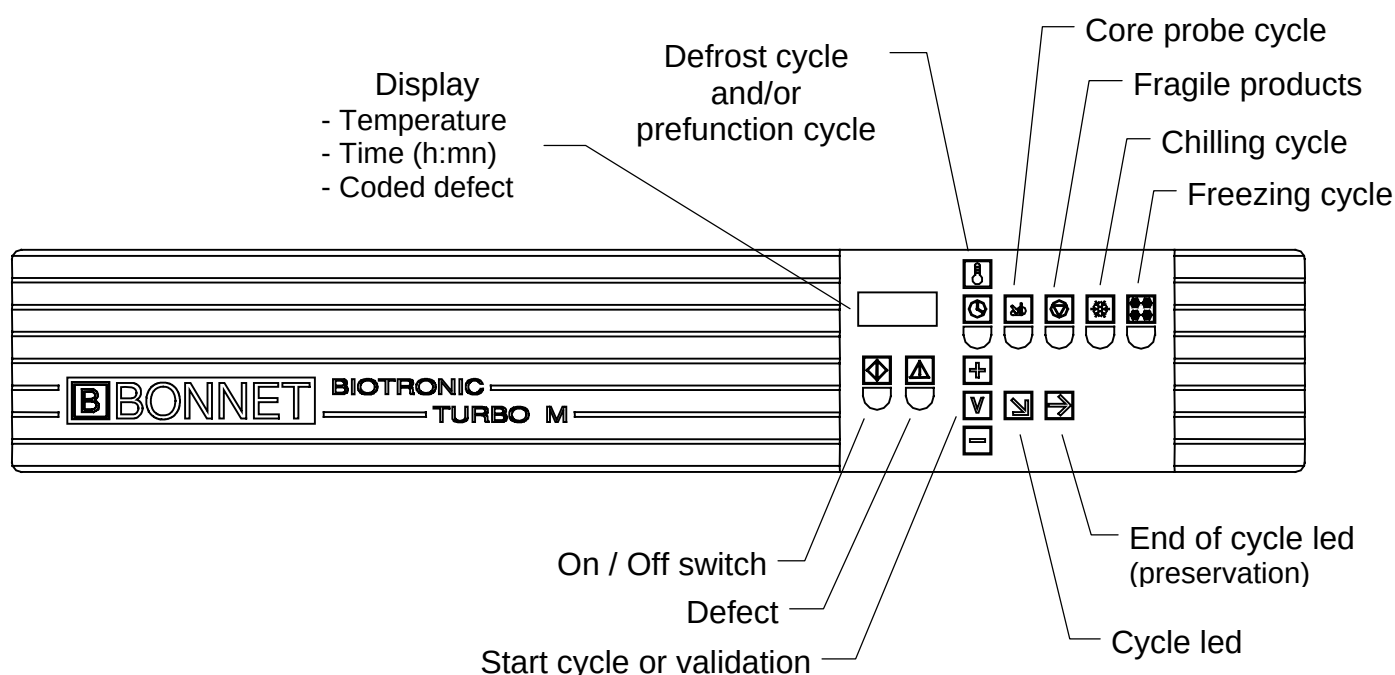
1. USE OF THE CONTROL PANEL

1.1 IMPORTANT

Stop of the unit does not cut the power supply to the appliance.

If the appliance is not to be used for a period of time, power must be cut off with the insulation switch located on the control panel's side, the plug or the disconnecter because of the risk of damaging the refrigerating equipment.

1.2 KEYBOARD DESCRIPTION



For the use of the keyboard, see :

- SIMPLIFIED GUIDE (paragraph 1.4 page 5)
- DETAILED GUIDE (paragraph 1.5)
 - . Start (paragraph 1.5.1 page 6)
 - . Cycle with core probe (paragraph 1.5.2 page 7)
 - . Cycle with timer (paragraph 1.5.3 page 8)
 - . End of cycle (paragraph 1.5.4 page 9)
 - . 'Fragile Products' function (paragraph 1.5.5 page 9)
- ALARMS and DEFECTS (paragraph 1.6 page 9)

1.3 GENERAL RECOMMENDATIONS

1.3.1 DEFROST, PREFUNCTION CYCLE

Before loading products, a prefunction cycle should be launched in order to cool the interior of the appliance. It can be launched automatically when the appliance is powered up, by modifying the factory settings (see 'instructions').

Each prefunction cycle is automatically preceded by a defrost cycle. If needed, this function can be stopped (see paragraph 1.6 'special settings')

During the defrost and/or the prefunction cycle, the display indicates the ambient temperature of the appliance. Defrost is made with a weak ventilation (except for MI3). It can be made with a strong ventilation by modifying the factory settings (see 'instructions').

After loading products into the appliance, choosing the chilling cycle at the closing of the door can be made compulsory by modifying the factory parameters (see 'instructions')

1.3.2 CYCLE WITH CORE PROBE

It is recommended to use the core probe whenever it is possible because it automatically controls the cycle. The 5 points core probe allows to read the hottest point at the heart of the product. The cycle ends when the hottest sensor reaches the required temperature (factory settings : +10°C in chilling mode and -18°C in freezing mode, which can be modified case by case). The display alternately indicates the temperature at the heart of the product and the remaining duration of the cycle.

With the factory settings, a core probe insertion test indicates that the probe is not used for a hot product (sound alarm and the indication 'SP' is displayed)

1.3.3 CYCLE WITH TIMER

When the use of the core probe is impossible, a cycle with timer is possible (factory settings : 2 hours in chilling mode and 4h30 in freezing mode. This can be modified case by case). The cycle programming time depends on the type and the quantity of food to be cooled. During the cycle the display indicates the remaining duration.

1.3.4 VENTILATION (except for MI3)

To avoid water spattering on the products, the ventilation power is automatically controlled by the temperature of the appliance, with a factory level pre set at 12°C.

1.3.5 "FRAGILE PRODUCTS" FUNCTION

In some cases, in blast chilling cycle, it is possible to refrigerate the products avoiding frost deposit (anti-freezing function). This function should only be used for reduced quantities of products. After selecting the chilling cycle with core probe or with timer, press "Fragile Products" key. In this case, the cycle will operate following the factory settings, with an air temperature superior to -15°C with a strong ventilation. This can be modified case by case whenever it is needed, for example, a weak ventilation can be applied for light products (except for MI3) (see paragraph 1.6 'Special settings')

1.3.6 PRESERVATION AFTER THE CYCLE

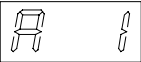
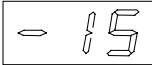
At the end of each cycle, the appliance programs automatically the preservation to a temperature of +3°C for a chilling cycle with a weak ventilation (except for MI3), or to a temperature of -18°C for a freezing cycle. The display indicates the ambient temperature. The storage duration inside the appliance can be unlimited thanks to an automatic control of the defrost during the preservation cycle.

1.4 SIMPLIFIED GUIDE with factory settings

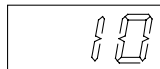
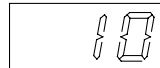
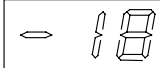
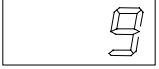
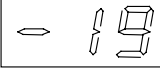
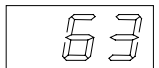
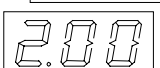
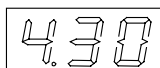
POWER UP		
Press on	 	Press for a few seconds.
PREFUNCTION CYCLE		
Press on	  	To select the cycle  Press on  to start the cycle. A defrost cycle is launched and automatically followed by a prefunction cycle.
LOADING		
At the end of the prefunction cycle, introduce the products into the appliance. For a core probe cycle, introduce the core probe deep inside the product.		
CYCLE WITH PROBE (with use of the core probe)		
Press on	  and   or  	To select the cycle in chilling or freezing mode. Sound alarm and the indication SP is displayed if the probe is not correctly used.
and if necessary	  or  	To modify the temperature of the set-point at the end of the cycle.
CYCLE WITH TIMER (without using the core probe)		
Press on	  and   or  	To select the cycle in chilling or freezing mode.
and if necessary	  or  	To modify the cycle duration
FRAGILE PRODUCTS		
Press on	 	To limit air temperature of a blast chilling cycle, avoiding frost deposit. (Press for a few seconds during the cycle)
START		
Press on	 	1) To start a cycle. 2) To stop a running cycle (press for a few seconds).
CYCLE EXECUTION		
Led		Running cycle
Led		Preservation cycle (between 0 and +3°C or at -20°C)
STOP OF THE APPLIANCE		
Press on	 	Press for a few seconds. It is recommended to let the door half-open when the appliance is not used.

1.5 DETAILED GUIDE

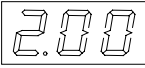
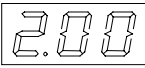
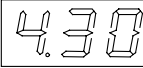
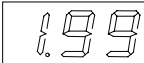
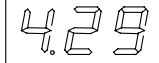
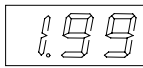
1.5.1 START (Prefunction cycle)

1	<u>Power up</u> Press for a few seconds 	1) All the leds as well as the display light up (Microprocessor test)  2) The machine number pre programmed during installation  lights up. 3) The ON led lights up  and the temperature of the compartment is displayed.
2	<u>Selection and start</u> <i>This stage can be launched automatically when the appliance is powered up, by modifying the factory setting (parameter 03)</i>  <u>Manual selection</u>  Press  <u>Manual start</u>  Press 	The 'Prefunction cycle'  led lights up. 1) Start of the defrost cycle with a pre set ventilation power (weak) (except for MI3) until the temperature of the compartment is superior to the pre set temperature (5°C) without exceeding a maximum time (30mn). <i>This function can be disactivated with the d6 parameter (see paragraph 'Special condition')</i> 2) Start of the compressor with production of cold air until the pre set temperature is reached (-15°C) The led  indicates the running cycle and the temperature of the compartment is displayed in real time. 
3	<u>Automatic end of cycle</u>	The 'Preservation after cycle' led lights up  The bell  rings for a few seconds. The appliance moves to the preservation stage, waiting for the products to be loaded.
NOT A	During the cycle, press(a few sec.) 	Full and definitive stop of the running cycle.
	The door is open during the cycle.	Temporary stop of the running cycle. When the door is closed, the cycle starts again.
	During the cycle, press  or 	Voluntary stop of the running prefunction cycle to select a refrigeration cycle (see paragraph 1.5.2 or 1.5.3)
	Opening or closing the door during or after the cycle by modifying the factory setting (parameter 02)	Choosing a refrigeration cycle is automatically asked. The leds flash   The bell  rings until a cycle is chosen. <i>All operating parameters set in factory can be modified when needed(see 'instructions').</i>

1.5.2 START AND STOP OF A CYCLE WITH CORE PROBE

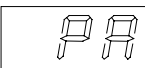
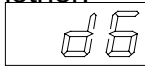
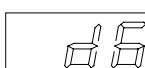
1	Open the door and introduce the products to be cooled. Introduce the core probe as deep as possible inside the products. Close the door	
2	<u>Selection</u> : Press  	The cycle and  chilling  leds light up, The factory preset temp. is displayed. 
3	<u>Mode</u> : Press   or  	The leds  or  light up, the factory pre set temperature is displayed  or 
4	<u>Settings</u> (eventual) : Press   or  	To modify the end of cycle set-point. Display of the temperature in real time  or 
5	<u>Start</u> : Press  	The 'Running cycle' led  lights up, the temperature at the heart of the product is  displayed in real time alternatively with the remaining duration of the cycle.  or  The cycle starts with a weak ventilation power, until the +12°C level set in factory is reached, and automatically moves to strong ventilation mode until the end of the cycle (except for MI3).
6	<u>Fragile products</u> : Press   (for a few seconds during the cycle)	Avoid frost deposit on the products by limiting the air temperature to -15°C (blast chilling cycle). <i>This function can be set by modifying the factory settings, with a different air temperature (cc parameter) and/or (except for MI3) a weak ventilation (F1 parameter)</i> Attention : This function must only be used with small loads.
7	<u>Automatic end of cycle</u>	The 'Preservation after cycle' led lights up  The bell  rings for a few seconds. The appliance moves to the preservation stage at the temperature of +3°C or of -20°C (except for MI3) with a weak ventilation power. Unloading : Do not forget to take out and clean the core probe before unloading.
N O T A	Opening of the door during the cycle	Temporary stop of the running cycle. When the door is closed, the cycle starts again.
	During the cycle, press(a few sec.)  	Full and definitive stop of the running cycle.
<i>All operating parameters set in factory can be modified when needed(see 'instructions').</i>		

1.5.3 START AND STOP OF A CYCLE WITH TIMER

1	Open the door and introduce the products to be cooled. Check the core probe is well installed on its support. Close the door.	
2	<u>Selection</u> :   Press  	The Cycle and  Chilling  leds light up The factory pre set cycle duration is displayed. 
3	<u>Mode</u> :   Press   or 	The Chilling  or freezing  leds light up, the factory pre set cycle duration is displayed.  or 
4	<u>Settings</u> (eventual) : Press   or 	To modify the cycle duration. Display of the cycle duration in real time  or 
5	<u>Start</u> : Press  	The 'Running cycle' led  lights up, the remaining cycle duration is displayed in real time.  or  The cycle starts with a weak ventilation power, until the +12°C level set in factory is reached, and automatically moves to strong ventilation mode until the end of the cycle (except for MI3).
6	<u>Fragile products</u> :  Press   (for a few seconds during the cycle)	Avoid frost deposit on the products by limiting the air temperature to -15°C (blast chilling cycle). <i>This function can be set by modifying the factory settings, with a different air temperature (cc parameter) and/or (except for MI3) a weak ventilation (F1 parameter)</i> Attention : This function must only be used with small loads
7	<u>Automatic end of cycle</u>	The 'Preservation after cycle' led lights up.  The bell  rings for a few seconds. The appliance moves to the preservation stage at the temperature of +3°C or of -20°C (except for MI3) with a weak ventilation power.
N O T A	Opening of the door during the cycle	Temporary stop of the running cycle. When the door is closed, the cycle starts again.
	During the cycle, Press(a few sec.)  	Full and definitive stop of the running cycle.
<i>All operating parameters set in factory can be modified when needed(see 'instructions').</i>		

1.6 SPECIAL SETTINGS

1.6.1 PROGRAMMATION (The regulation is ON)

1	Access to programming : Press simultaneously and for a few seconds  and 	Beginning of the programming mode. Display of the indication 
2	Selection of parameters : Press simultaneously  or 	Display of the parameters one after another. Display of the parameters' codes 
3	Access to the selected parameter : Press 	Presetting display of the parameter 
4	Modification of the parameter setting Press successively  or 	Display of the parameter's values one after another. Display of the parameter's values 
5	Validation of the parameter's setting : Press 	Display of the modified parameter's code 
6	To exit programming: Press simultaneously and for a few second  and 	Restart of the system. During or after programming, the system restarts automatically if no key is pressed in less than 15 seconds.

Start again stage 2 to 5 for the other parameters.

The parameters' modifications are definitively taken into account, even after the stop of the appliance.

1.6.2 TABLE OF PARAMETERS

Code	Parameters	Min	Max	Fact.
PA	Password to access level 2 (reserved to installer)	-99	99	--

Temperature parameters

cA	Core probe temperature reading (read only) °C	--	--	--
cc	Fragile products interior probe set-point °C	-55	99	-15

Defrost parameters

d6	Defrost at the beginning of the prefunction cycle 0 = No, 1 = Yes	0	1	1
----	---	---	---	---

Ventilation parameters

F1	Ventilation with Fragile Products ON ⁽¹⁾ 0 = Weak, 1 = Strong	0	1	1
----	--	---	---	---

Printing parameters (with optional printer)

i1	Printing frequency in chilling cycle mn	0	60	5
i2	Printing frequency in preservation cycle mn	0	60	30
i3	Printing at the beginning of the cycle 0 = No, 1 = Yes	0	1	1
i4	Date setting Day	1	31	(2)
i5	Month	1	12	(2)
i6	Year	990	050	(2)
i7	Time setting Hour	0	23	(2)
i8	Minute	0	59	(2)

(1) Except for MI3

(2) The configuration must be set during installation

1.7 ALARMS AND DEFECTS

Indicated by the red led



and the sound alarm



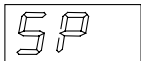
The display indicates the type of defects



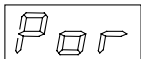
The buzzer can be stopped by pressing



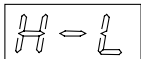
1.7.1 USE SECURITIES



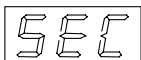
The core probe is not or not well introduced in the product.



The door is open.



The normal time is over.

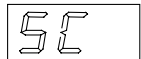


Supply breakdown.

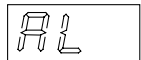
1.7.2 OPERATION DEFECTS (call for the repairer)



Regulation probe defect.



Core probe defect.



Refrigerating defect.

2. USE

2.1 GENERAL REQUIREMENTS

Do not load products in a way that obstructs the air circulation, this is important to ensure even distribution of cold air within the cavity.

When the probe is not used, it must be located absolutely on its support.

When the appliance is not used, it is recommended to let the door half-open.

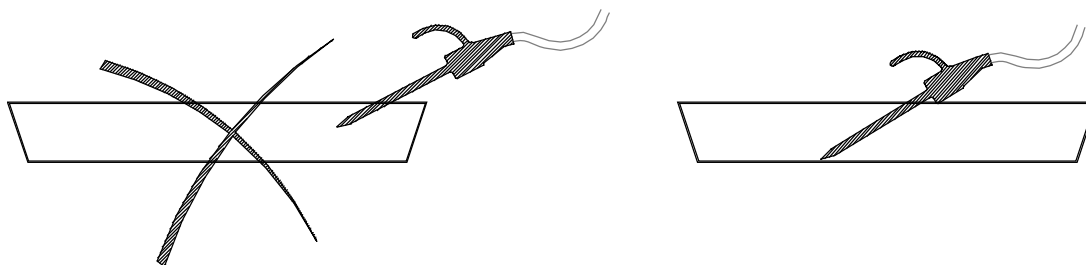
2.2 LOADING

A space of at least 15 mm is required between each item to allow refrigerated air to pass around the products.

The chilling or freezing time depends on the weight, nature and thickness of the food, therefore it is difficult to accurately define a loading capacity.

2.3 CORE PROBE POSITION

The core probe must be introduced as deep as possible in the product to be cooled.



2.4 VENTILATION

To guaranty refrigerating performance, take care the fans grids and the funnel for air outlet have not been blocked up.

2.6 DEFROST WATER EVACUATION

Check that nothing blocks up the evacuation hole located at the bottom of the tank in front of the evaporator.

It is necessary to empty the defrost water collection tray located under the appliance once per day.

3. MAINTENANCE

IMPORTANT

Before any cleaning operation,
ensure that the appliance is unplugged.

Do not use a spray hose in order
to avoid water spattering

3.1 STAINLESS STEEL

Use warm soapy water or a non corrosive cleaner (such as Teepol or an equivalent product) then rinse thoroughly and dry.

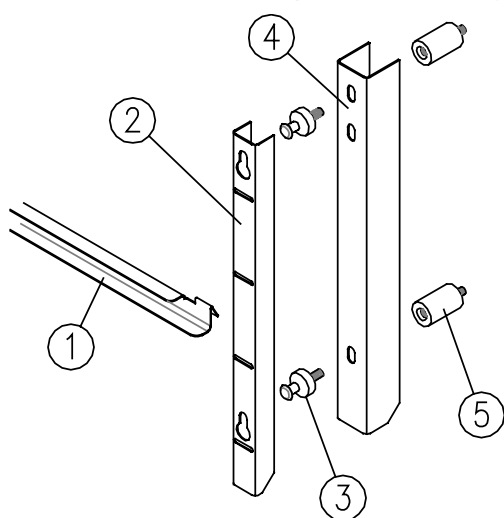
Do not use abrasive, aggressive or concentrated cleaning products.

Do not use wire wool under any circumstances. Fingerprints can be removed with a cloth soaked in alcohol.

3.2 INTERIOR LINING

This should be cleaned daily.

To ease a complete cleaning, it is possible to dismantle the interior fittings.



1) Unhook the shelves runners ①

2) Unhook the slides supports ②

3) Unscrew the slides supports pins ③ and remove the braces ④

4) Unscrew the braces pins ⑤

Do the opposite for the reassembly

To obtain a 600x400 (euronorm) interior lining, fix the slides supports pins ③ directly in the interior lining without the braces pins ⑤ and the braces ④.

3.3 REGULAR CLEANING.

The door seals can be removed easily for cleaning.

To ensure that the refrigeration system continues to operate properly and provides long and reliable service the condenser must be cleaned every 3 to 6 months. This work should be undertaken by a refrigeration engineer (see instructions).

4. OPERATION ANOMALIES

In case of abnormal operation and before the intervention of the aftersales service,

Findings	Causes, Checkings and solutions
Impossible to switch on the appliance with the On/Off switch.	Electric supply cut. - <i>Check the connection of the supply cable</i> - <i>Check the fuses and/or the circuit-breaker located before the power plug.</i>
Complete stop of the appliance during a cycle.	Power cut of the area - <i>Check the fuses and/or the circuit-breaker located before the power plug.</i>
The compressor operates intermittently.	Compressor security thermostat. - <i>Check the operation of the condenser fan.</i> - <i>Check the condenser is not clogged.</i> - <i>Check the ambient temperature.</i> <i>Ventilate if necessary.</i>
The group unit (compressor and condenser fan) operates intermittently.	Security pressure sensitive switch cut. - <i>Check the operation of the condenser fan.</i> - <i>Check the condenser is not clogged.</i> - <i>Check the ambient temperature.</i> <i>Ventilate if necessary.</i>
The cycle duration is superior to the required time.	Loading too important. - <i>Reduce the loading.</i> High ambient temperature. - <i>Ventilate.</i> Frozen evaporator. - <i>Defrost.</i> Evaporators fans blocked. - <i>Clean them.</i> Condenser too clogged. - <i>Make it clean</i>

INSTRUCTIONS

REACH IN BLAST CHILLER AND FREEZER

BIOTRONIC TURBO Electronic Regulation

Chiller and freezer : MI 3, MI 6, MI 10

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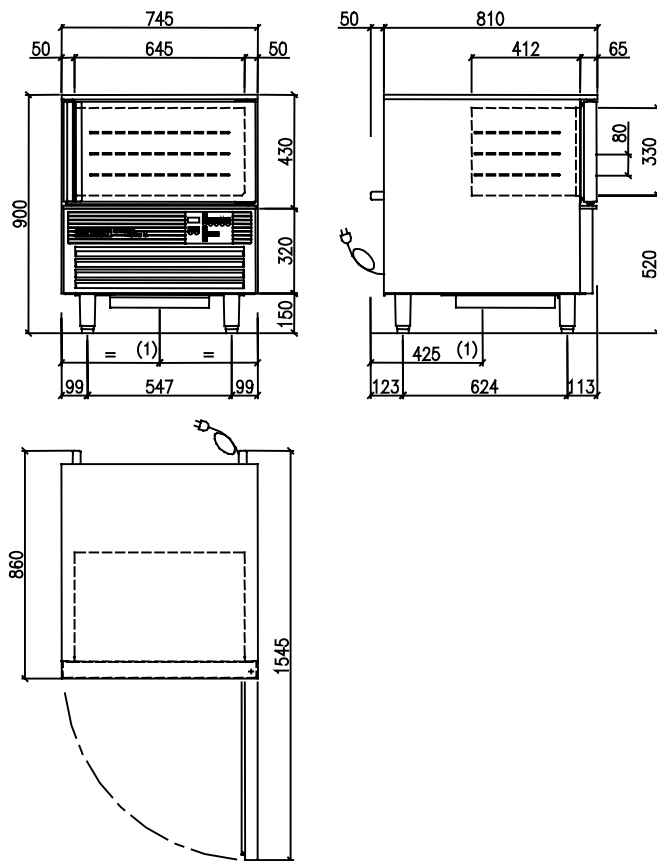
IMPORTANT RECOMMENDATIONS

- * When installing the appliance, ensure that there is adequate circulation and air volume to cool the condenser and compressor.
- * Avoid installing the appliance near major sources of heat, or in direct sunlight.
- * Note that too high an ambient temperature can reduce performance.
- * There must be earth continuity between the appliance and the mains connections.
- * The supply cable that is fitted is a specific part and should only be replaced with an original part. Ensure that the plug is easily accessible.
- * The installer should ensure that the electrical connection is suitably protected by an appropriate fuse or circuit breaker (see rating plate).
- * Ensure that the appliance is switched OFF before any intervention on the electrical or refrigeration circuits and during cleaning.
- * The compressor condenser must be cleaned regularly (every 3 to 6 months).
- * Water splashing can cause damage.
 - . To avoid the risk of splash damage do not clean with a hose or high-pressure spray.
 - . Do not locate the unit where it is exposed to the elements.
- * After any intervention ensure that the original installation guidelines are respected to avoid any form of risk.
- * Reference to the label NF FOOD HYGIENE :
Certified by : AFAQ AFNOR Certification
 11 Avenue Francis de Pressensé
 93571 SAINT DENIS LA PLAINE
 Cedex – France
- * The label NF FOOD HYGIENE complies with the NF031 requirement.
The main certified characteristics are :
 - . Cleaning qualification
 - . Refrigerating performances
- * If the installation, the use or the service is modified, the appliance will lose the right to use the label NF FOOD HYGIENE.

SPECIFICATION AND CHARACTERISTICS IN THIS DOCUMENT
MAY BE SUBJECT TO BE MODIFIED WITHOUT PRIOR NOTICE

1. TECHNICAL DATA

1.1 MI 3 Type



GENERAL DATA

Chilling from +63°C in less than 2 hours.

Freezing from +63°C to -18°C in less than 4 hours 30.

Capacity : 12 kg

Ambient temperature +43°C

Complies with

Electric safety : EN 60 335-1

Food hygiene : XP U 60 010

Complies with EC requirements



S216A15

MI 3

CONSTRUCTION

Austenitic stainless exterior casing (sides, rear, front panel, and door) and interior lining.
Bottom of the exterior casing and refrigeration unit frame in corrosion proof galvanised sheet.
Austenitic stainless door liner.

Insulated body

- Monocoque type.
- Radiused interior lining bottom and sides.
- Polyurethane foam insulation, 50 mm thick.
- Thermal break between inner and outer structure.
- 4 adjustable legs (or optional casters)

Plain door

- Easy demountable magnetic door seal.
- Door opening can be reversed.

TECHNICAL DATA

Delivered with a moulded plug.

The installer is responsible for protecting the appliance against overloads or electrical defects.
Ensure a circuit-breaker or fuses are installed.

Voltage : 1~230V 50 Cycle

Input power : 1400 W

Protection : aM 6

Load : See appliance instruction plate

Condenser : Forced air

Evaporator : Fanned, corrosion proof

Defrost water : Collection tray located under the appliance. External connection possible (1).

Refr. Power : 960 W at -30/+55°C

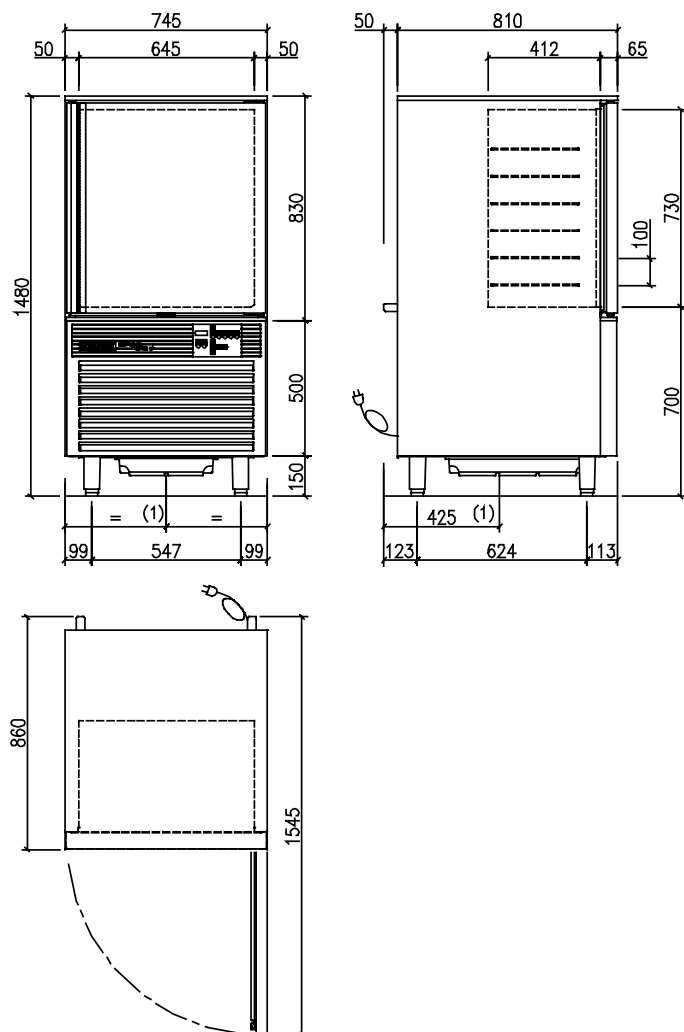
Refrigerant : R404A

Compressor : hermetic 1,5 CV

1.2 MI 6 Type

S107D52

MI 6



CONSTRUCTION

Austenitic stainless exterior casing (sides, rear, front panel and door) and interior lining.
Bottom of the exterior casing and refrigeration unit frame in corrosion proof galvanised iron.
Austenitic stainless door liner.

Insulated body

- Monocoque type.
- Radiused interior lining bottom and sides.
- Polyurethane insulation foam, 50 mm thick.
- Thermal break between inner and outer structure.
- 4 adjustable legs (or optional casters).

Plain door

- Easy demountable magnetic door seal.
- Door opening can be reversed.

TECHNICAL DATA

Delivered with a moulded plug.

The installer is responsible for protecting the appliance against overloads or electrical defects.
Ensure a circuit-breaker or fuses are installed.

Voltage : 3N~400V 50 Cycle
Input power : 1800 W
Protection : aM 6

Load : See appliance instruction plate
Condenser : Forced air
Evaporator : Fanned, corrosion proof
Defrost water : Collection tray located under the appliance . External connection possible (1).

Refr. power : 2000 W at -30/+55°C
Refrigerant : R404A
Compressor : Hermetic 2,5 CV

GENERAL DATA

Chilling from +63°C to +10°C in less than 2 hours.

Freezing from +63°C to -18°C in less than 4 hours 30.

Capacity : 25 kg

Ambient Temperature +43°C

Complies with

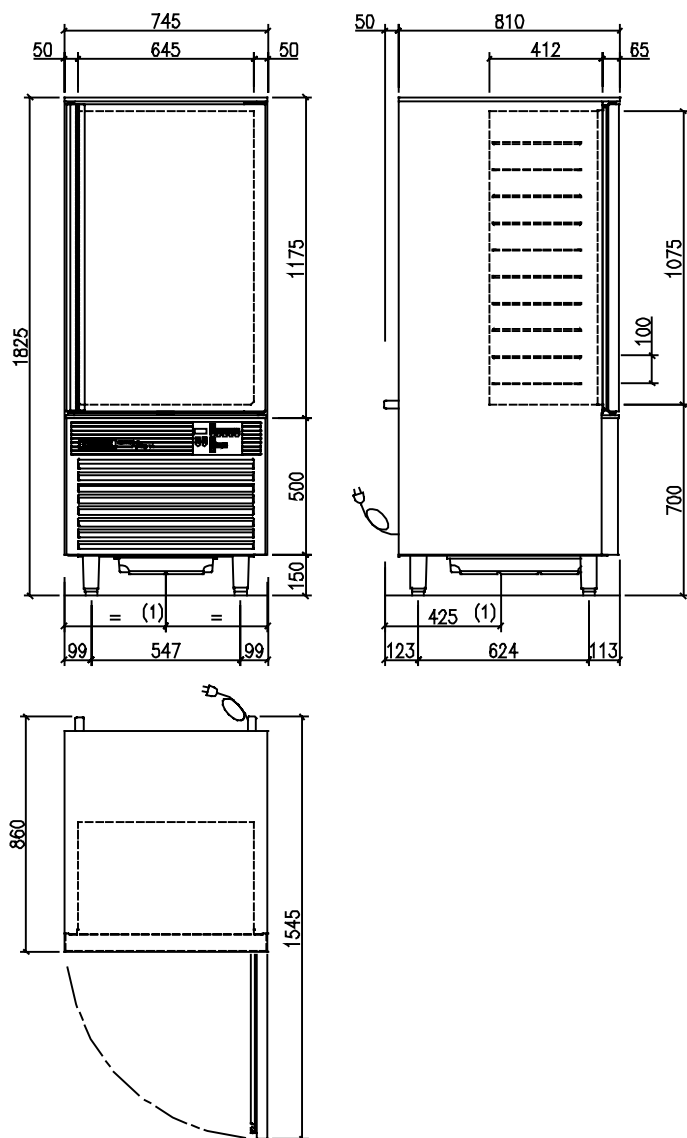
Electric Safety : EN 60 335-1

Food Hygiene : NF U 60 010

Complies with E.C requirements



1.3 M 10 Type



GENERAL DATA

Chilling from +63°C to +10°C in less than 2 hours.

Freezing from +63°C to -18°C in less than 4 hours 30.

Capacity : 40 kg

Ambient Temperature +43°C

Complies with

Electric safety : EN 60 335-1

Food Hygiene : NF U 60 010

Complies with E.C requirements



S120D52

MI 10

CONSTRUCTION

Austenitic stainless exterior casing (sides, rear, front panel and door) and interior lining.
Bottom of the exterior casing and refrigeration unit frame in corrosion proof galvanised iron.
Austenitic stainless door liner.

Insulated body

- Monocoque type.
- Radiused interior lining bottom and sides.
- Polyurethane insulation foam, 50 mm thick.
- Thermal break between inner and outer structure.
- 4 adjustable legs (or optional casters).

Plain door

- Easy demountable magnetic door seal.
- Door opening can be reversed.

TECHNICAL DATA

Delivered with a moulded plug.

The installer is responsible for protecting the appliance against overloads or electrical defects.
Ensure a circuit-breaker or fuses are installed.

Voltage : 3N~400V 50 Cycle

Input power : 2850 W

Protection : aM 10

Load : See appliance instruction plate

Condenser : Forced air

Evaporator : Fanned, corrosion proof

Defrost water : Collection tray located under the appliance . Exterior outlet possible (1).

Refr. power : 2500 W at -30/+55°C

Refrigerant : R404A

Compressor : Hermetic 3,5 CV

2. INSTALLATION

2.1 GENERAL REQUIREMENTS

The appliance must be installed, modified and repaired by a specialized engineer in accordance with current regulations.

2.2 HANDLING

The appliance must be handled with suitable lifting equipment, transported on its original pallet and not stacked.

If moving the appliance without its pallet, it must be carried and not pulled.

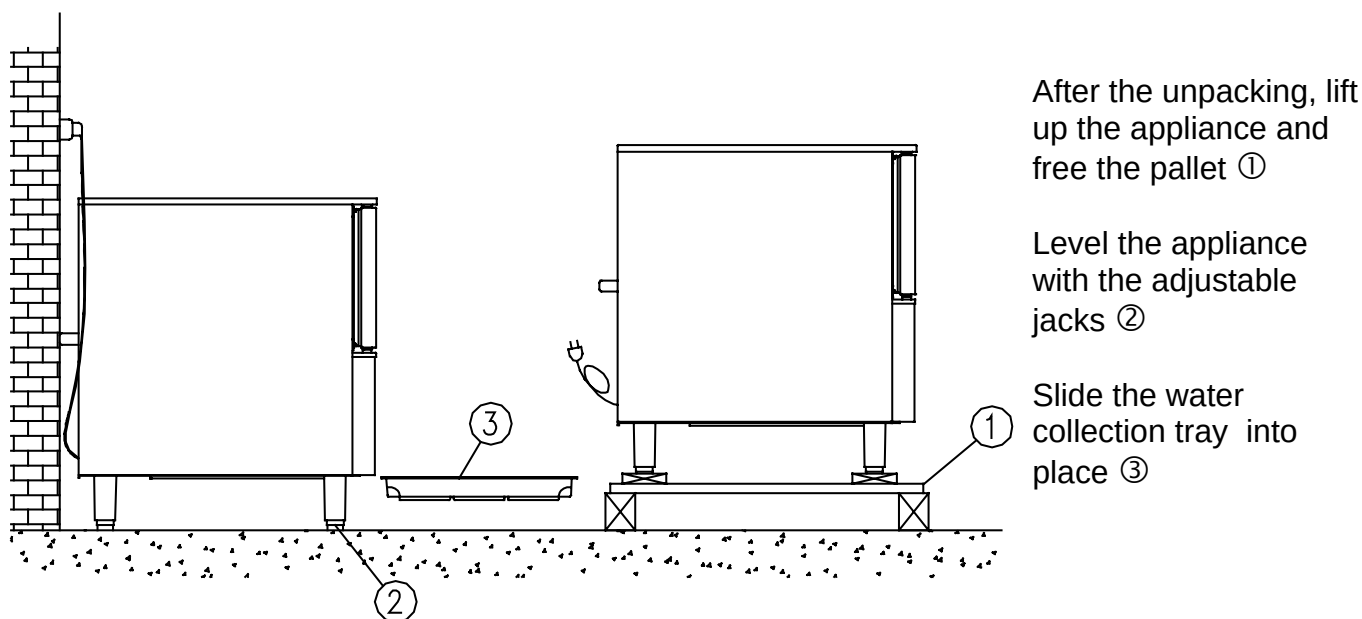
2.3 UNPACKING AND INSTALLATION

2.3.1 LOCATION

When choosing the location, make sure that there is sufficient air circulation around the appliance to allow correct cooling of the condenser and compressor.

Do not install near a source of heat.

2.3.2 UNPACKING



N.B : the door alignment is ensured by the front leg adjustment.

2.3.3 CONNECTIONS

ELECTRICAL

See paragraph 1 "Technical data"

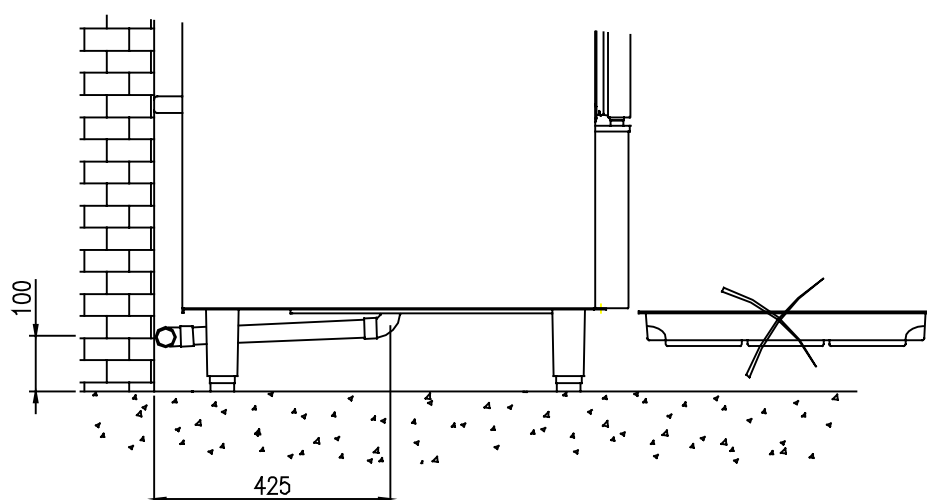
The appliance is fitted with a supply cable that should not be removed.

This unit must be earthed (see recommendations).

A circuit-breaker or suitable fuses should be provided on the supply.

DEFROST WATER

The collection tray can be replaced by a tube outlet (Tube PVC Ø32 not supplied).



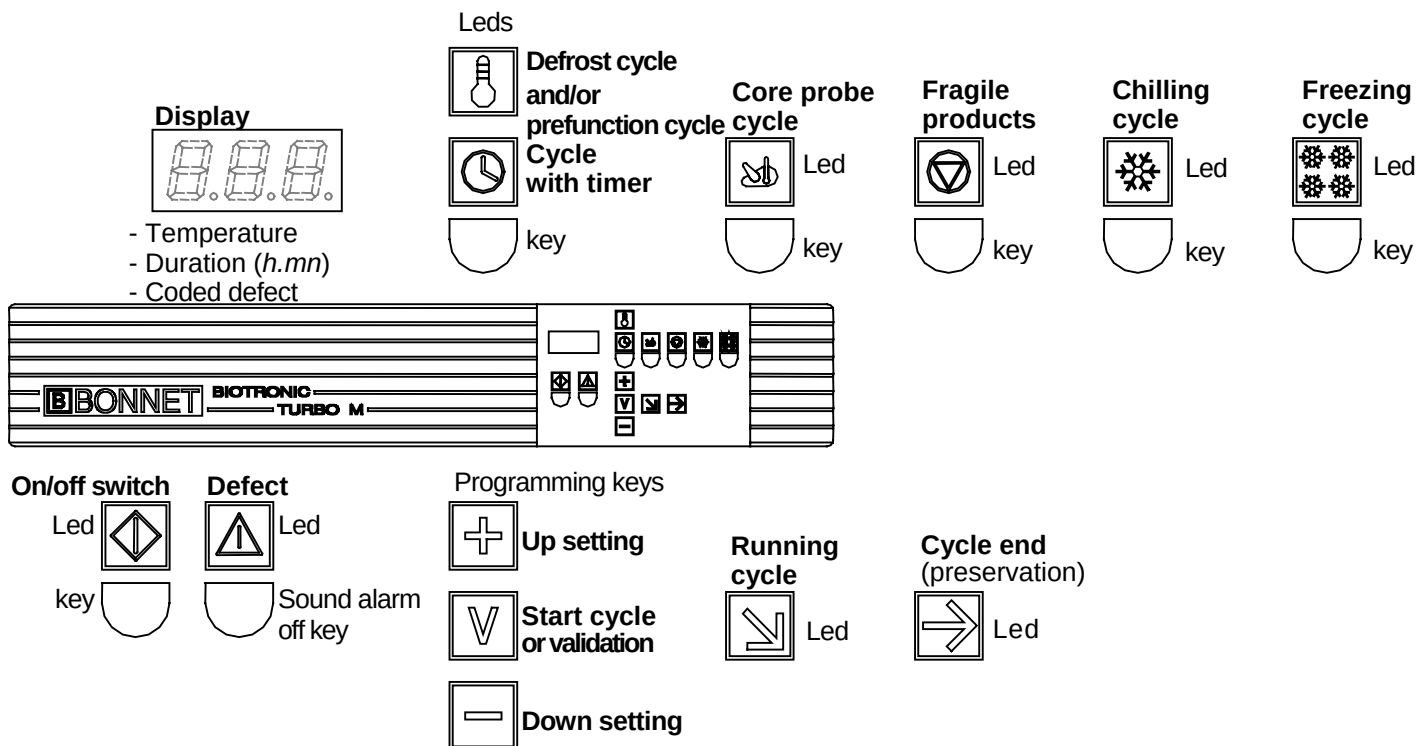
3. OPERATION

3.1 GENERAL REQUIREMENTS

Ensure that the fans are not obstructed.

If the appliance has been laid down during transport or handling, wait 24 hours before use to allow refrigerant oil to return to the compressor.

3.2 PRESENTATION OF THE CONTROL PANEL



3.3 ELECTRONIC CARD SETTING

3.3.1 CONFIGURATION OF PARAMETERS

The appliance is delivered from the factory with a standard configuration to fit the most current uses (see paragraph 1.3, page 4 of the user manual). If needed, this configuration can be modified.

There are 2 levels of configuration :

Level 1 : Accessible to user (see 'User manual' page 9, paragraph 1.6)

Level 2 : Password protected, only accessible to installer to select and change the factory setting of all parameters (see 'Table of parameters' paragraph 3.3.2 of page 9)

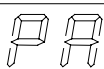
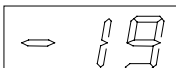
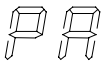
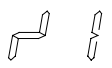
Parameters accessible at level 1 are also accessible at level 2.

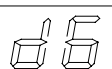
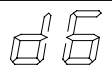
The parameters' modifications, at level 1 as well as at level 2, are definitively taken into account, even after the stop of the appliance.

When the appliance is used for the first time, it is necessary to program a code which must be set with the user, and which must be attributed to the chiller with the L5 and L6 parameters. Check the date and the hour of the regulator's internal clock with the i4, i5, i6, i7, and i8 parameters.

3.3.2 ACCESS TO PARAMETERS

The appliance is ON :

1	<u>Access to level 1 :</u> Press simultaneously and for a few seconds  and 	Beginning of the programming mode. Display of the indication 
2	<u>Access to PA parameter :</u> Press 	Pre setting display of the parameter 
3	<u>Setting of the parameter :</u> Press successively  or 	To adjust value -19 Display of the parameter's value 
4	<u>Validation of the parameter's setting :</u> Press 	Display of the modified parameter's code 
5	<u>Access to level 2 :</u> Press simultaneously and for a few seconds  and 	Beginning of the programming mode. Display of the first parameter 

6	<u>Selection of parameters :</u> Press successively  or 	Display of the parameters one after another. Display of the parameters' codes 
7	<u>Access to the selected parameter :</u> Press 	Pre setting display of the parameter 
8	<u>Modification of the parameter setting</u> Press successively  or 	Display of the parameter's values one after another Display of the parameter's values 
9	<u>Validation of the parameter's settings</u> Press 	Display of the modified parameter's code 

Start again stage 6 to 9 for the other parameters.

10	<u>To exit programming :</u> Press simultaneously and for a few seconds  and 	Restart of the system. During or after programming, the system restarts automatically if no key is pressed in less than 15 seconds.
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The parameter's modifications are definitively taken into account.

3.3.3 TABLE OF PARAMETERS

Code	Parameters	Mini	Maxi	Usine
(2) PA	Password to access level 2 (set on -19)	-55	99	0

I = PROBES

/1	Core probe calibration (correction by 1/8°C)	-55	99	0
/3	Number of core probe points 0 = 1 point, 1 = 5 points	0	1	1
/5	Ambient probe calibration (correction by 1/8°C)	0	6	0
/8	Temperature scale 0 = °F, 1 = °C	0	1	1

O = MACHINE CONFIGURATION

o0	Cycle type 0 = Chill, 1 = Chil/fr	0	1	1
o1	Door contact 0 = No, 1 = Yes	0	1	1
o2	Choice of cycle when closing the door 0 = No, 1 = Yes	0	1	0
o3	Automatic prefunction cycle when powered up 0 = No, 1 = Yes	0	1	0

r and c = REGULATOR CONFIGURATION

r0	Prefunction cycle regulation differential (°C)	1	15	3
r1	Prefunction cycle set-point (°C)	-55	99	-15
c0	Preservation after cycle regulation differential (°C)	1	15	3
(1) c1	Chilling cycle duration without core probe (mn)	30	180	120
(1) c2	End of chilling cycle set-point with core probe (°C)	0	99	10
c3	Chilling cycle preservation temperature set-point (°C)	-55	99	3
(1) c4	Chilling/freezing cycle duration without core probe (mn)	30	300	270
(1) c5	End of chilling/fr. cycle set-point with core probe (°C)	-55	0	-18
c6	Chilling/freezing cycle preservation temperature set-point (°C)	-55	99	-20
c7	Ambient / Core probe insertion check (with cb = 1) (°C)	0	99	5
(1) c8	Temperature level for countdown start (°C)	0	99	63
c9	End of cycle buzzer alarm duration (s)	0	99	3
(2) cA	Core probe temperature (read only)	--	--	--
cb	Core probe insertion test (according to c7 and cE) 0 = No, 1 = Yes	0	1	1
(2) cc	Fragile products ambient probe set-point (°C)	-55	99	-15
cd	Temperature level for weak/strong ventilation cycle (°C)	-55	99	12
cE	Core probe insertion test duration (with cb = 1) (s)	1	99	30

C = COMPRESSOR PROTECTIONS

C0	Compressor delay at power up (mn)	0	15	0
C1	Min. time between 2 starts of the compressor (mn)	0	15	0
C2	Min. break after stop of the compressor (mn)	0	15	0
C8		0	99	85

d = DEFROST

d0	Time between 2 defrosts (h)	0	99	8
d1	Defrost type 0 = Ventil, 1 = Elect	0	1	0
d2	End of defrost temperature (ambient probe) (°C)	0	30	5
d3	Max. defrost duration (safety time) (mn)	1	99	30
d4	Defrost at the beginning of the chilling cycle 0 = No, 1 = yes	0	1	0
d5	Defrost delay at the beginning of the pres. cycle 0 = Without (mn)	0	99	0
(2) d6	Defrost at the beginning of the prefunction cycle 0 = No, 1 = Yes	0	1	1
d7	Draining time (mn)	0	99	0
db	Time basis 0 = H mn, 1 = mn s	0	1	0

- (1) : Parameters corresponding to legislation (H-L indication if the cycle doesn't comply with these settings).
 (2) : Configuration parameters on level 1, accessible to user.

TABLE OF PARAMETERS (2nd part)

Code	Parameters	Min	Max	Fact.
------	------------	-----	-----	-------

F = VENTILATION

F0	Ventilation ON in preservation cycle	0 = weak, 1 = strong	0	1	0
(2) F1	Ventilation ON with fragile products	0 = weak 1 = strong	0	1	1
F4	Ventilation ON in defrost cycle	0 = weak, 1 = strong	0	1	0
F5	Ventilation rythm after draining		0	15	0

u = OUTLET ASSIGNATION

u0	RL1 relay operation	0 = on/off, 1 = alarm	0	1	1
u1	RL1 relay polarity	0 = NO, 1 = NC	0	1	0

i = PRINTER

i0	Printer presence	0 = no, 1 = yes	0	1	0
(2) i1	Printing frequency in chilling cycle	(mn)	0	60	5
(2) i2	Printing frequency in preservation cycle	(mn)	0	60	30
(2) i3	Printing at the beginning of the cycle	0 = no, 1 = yes	0	1	1
(2) i4	Date setting	Day	1	31	(3)
(2) i5		Month	1	12	(3)
(2) i6		Year	990	050	(3)
(2) i7	Time setting	Hour	0	23	(3)
(2) i8		Minute	0	59	(3)

L = NETWORK

L1	Instrument address		1	15	1
L2	Instrument group		0	7	0
L3	Timeout link		2	250	7
L4	Transfer rate	0 = 1200 bauds 1 = 2400 bauds 2 = 4800 bauds 3 = 9600 bauds	0	3	1
L5	Machine code		A	Y	(3) A
L6	Machine number		1	99	(3) 1

(2) : Configuration parameters on level 1, accessible to user.

(3) : Configuration parameters which must be set during the installation.

4. INTERVENTIONS AND REPAIRS

IMPORTANT

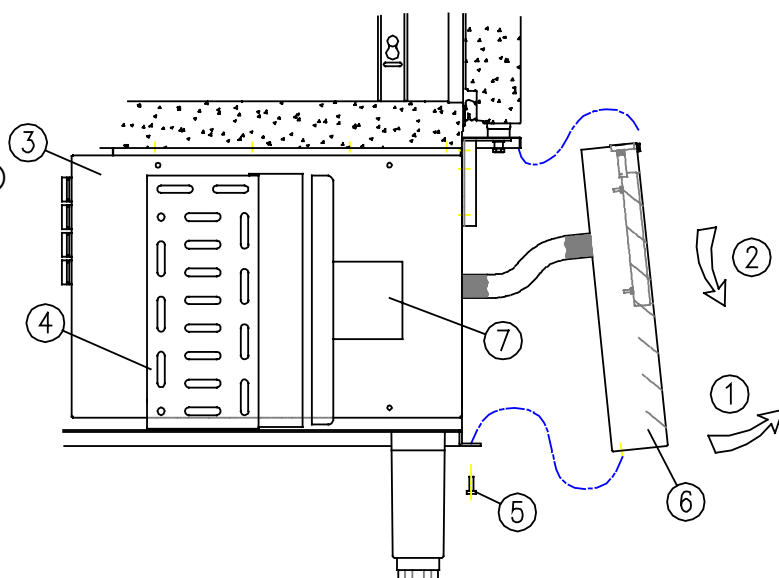
Before any operation, ensure that the appliance is unplugged.

4.1 ACCESS TO COMPRESSOR UNIT

To clean the condenser ④, to access the unit and the electric box ③ remove the control panel grid ⑥.

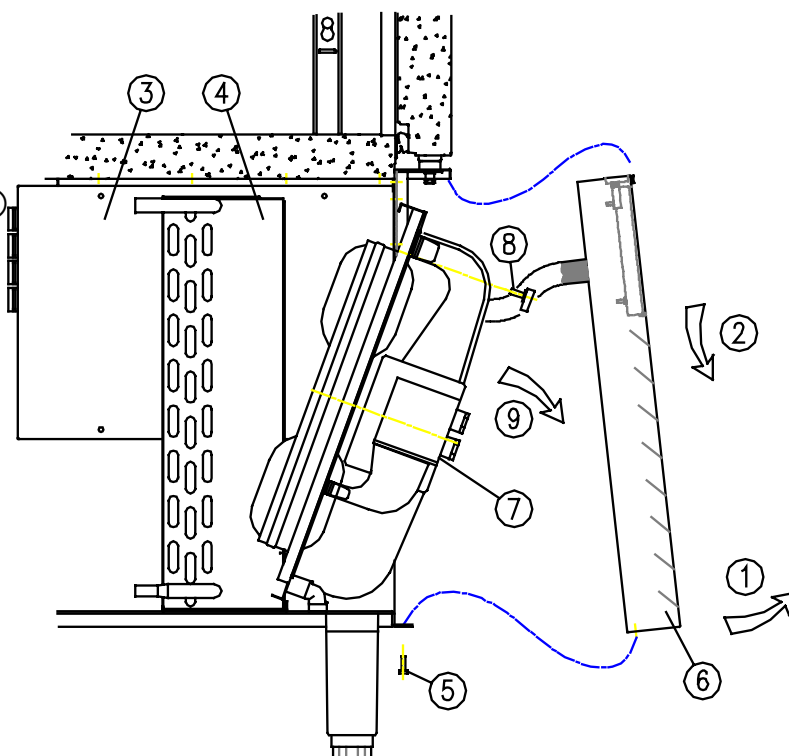
4.1.1 MI 3 MODEL

- 1) Unscrew the 2 screws ⑤
- 2) Remove the grid ⑥ following ① and ②
- 3) Remove the condenser fan ⑦ by cutting the 2 "rilsan" rings
- 4) Clean the condenser ④ with a non metallic brush with soft hair
- 5) Refix the fan with , 2 "rilsan" rings on the condenser cross.



4.1.2 MI 6 and MI 10 MODELS

- 1) Unscrew the 2 screws ⑤
- 2) Remove the grid ⑥ following ① and ②
- 3) Unscrew the 2 "star" screws ⑧ and pivot the fan support following ⑦
- 4) Clean the condenser ④ with a non metallic brush with soft hair.
- 5) Refix the fan by screwing the 2 "star" screws ⑧.



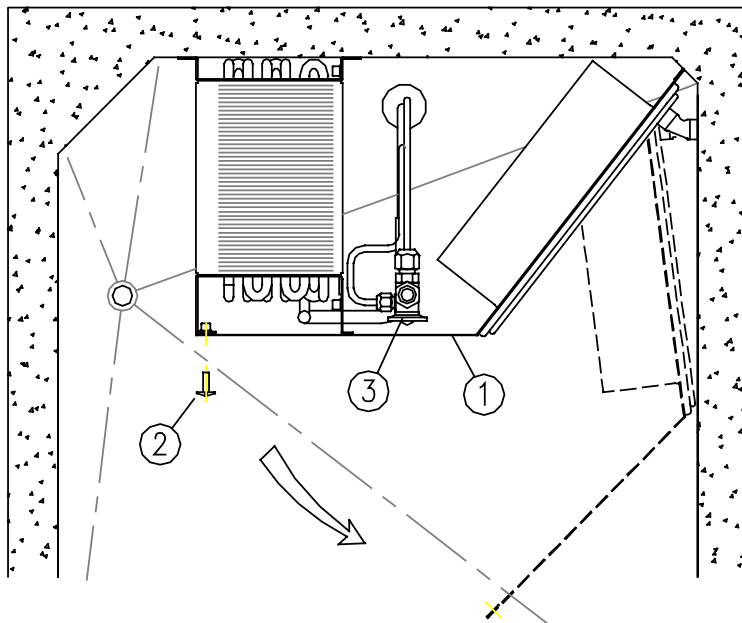
REMARKS

Unscrew the 4 nylon nuts to access the display card.

Take out the power box using rail, to access the micro card and to the connection terminals.

4.2 ACCESS TO THE EVAPORATOR

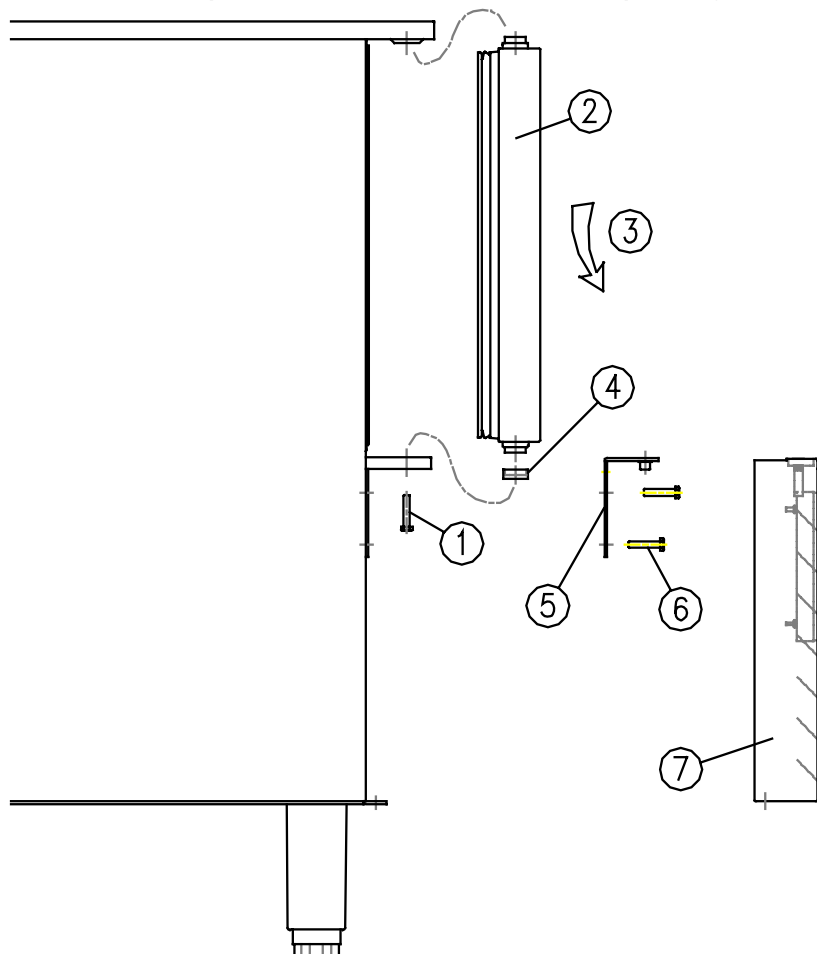
The access to the evaporator (access to the expansion valve ③) is possible by pivoting the fan support ① once the screw (or screws) ② is unscrewed.



To obtain a maximum opening of the fan support, the interior lining should be removed. (See paragraph 3.2 of the user manual)

4.3 REPLACING OF THE DOOR

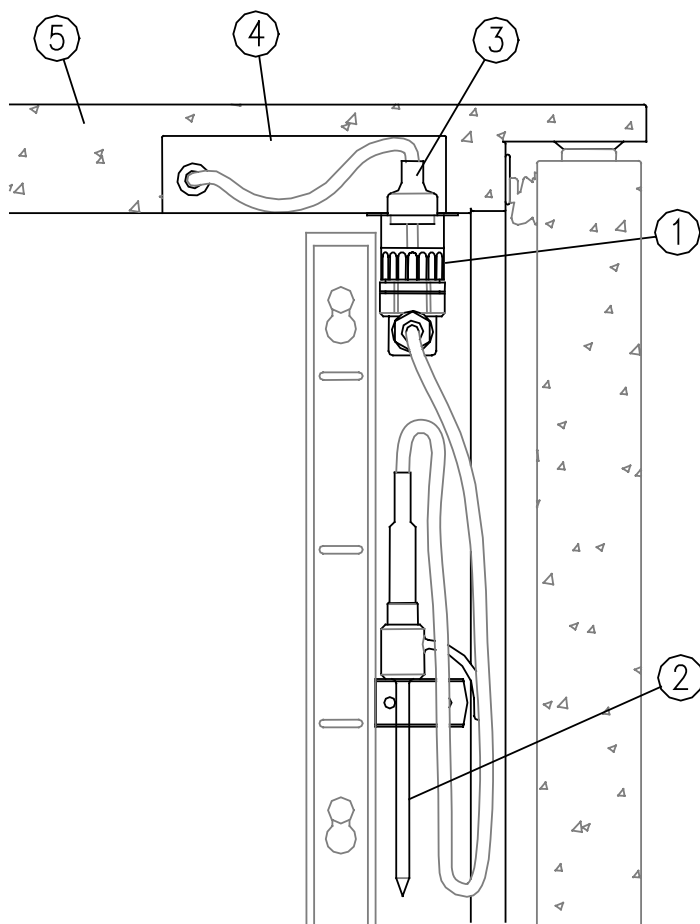
To replace or reverse the door opening.



- 1) Remove the grid ⑦ (see paragraph 4.1)
- 2) Unscrew the hinge screw ①
- 3) Remove the door ② from the upper hinge following ③
- 4) Refix the door including the washer ④

To reverse the door opening, invert the supports ⑤ from right to left by the screws ⑥.

4.4 REPLACING OF THE PROBE



1) Unscrew the male connector ① from the female connector ③ located under the top ⑤ of the appliance.

2) Replace the core probe ②

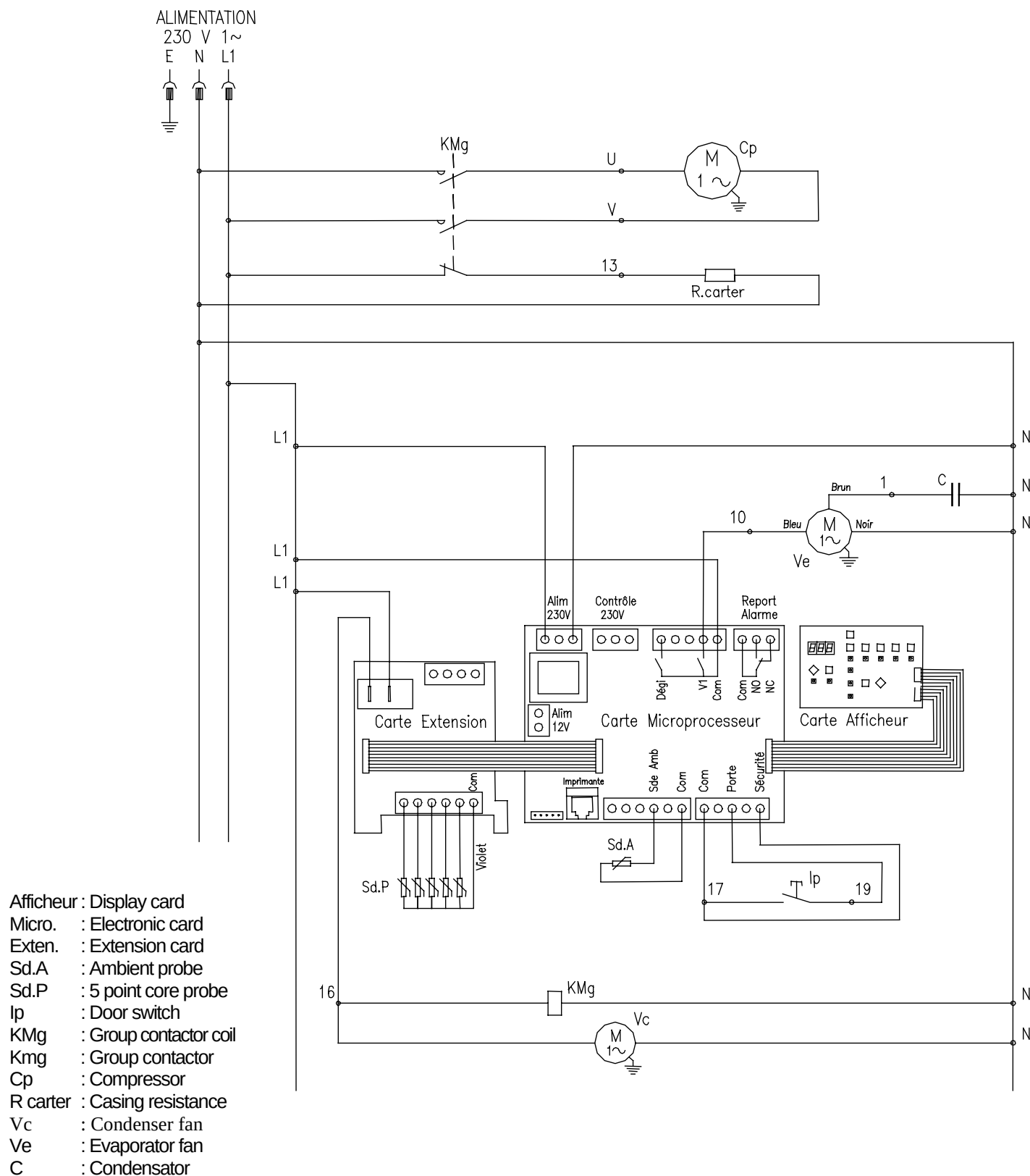
Nota : The surmoulded connector ③ is located in a box ④ in the top insulation ⑤.

To replace it, it is necessary to make a connection with the cable introduced in the appliance insulation.

5. ELECTRICAL DIAGRAMS

5.1 PRINCIPLE DIAGRAM FOR MI 3

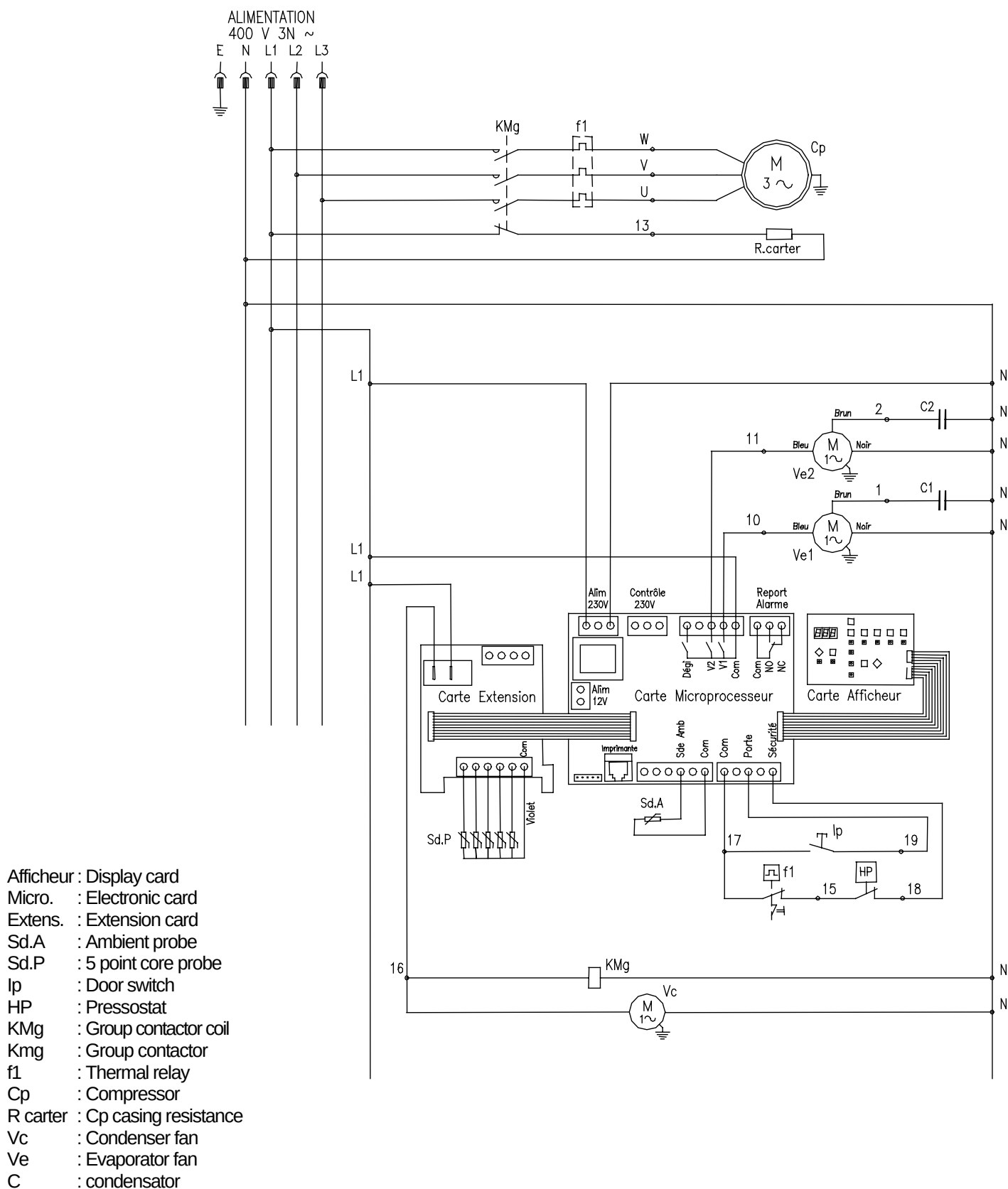
N° SE146



The installer is responsible for protecting the appliance against overloads or electrical defects.

5.2 PRINCIPLE DIAGRAM FOR MI 6

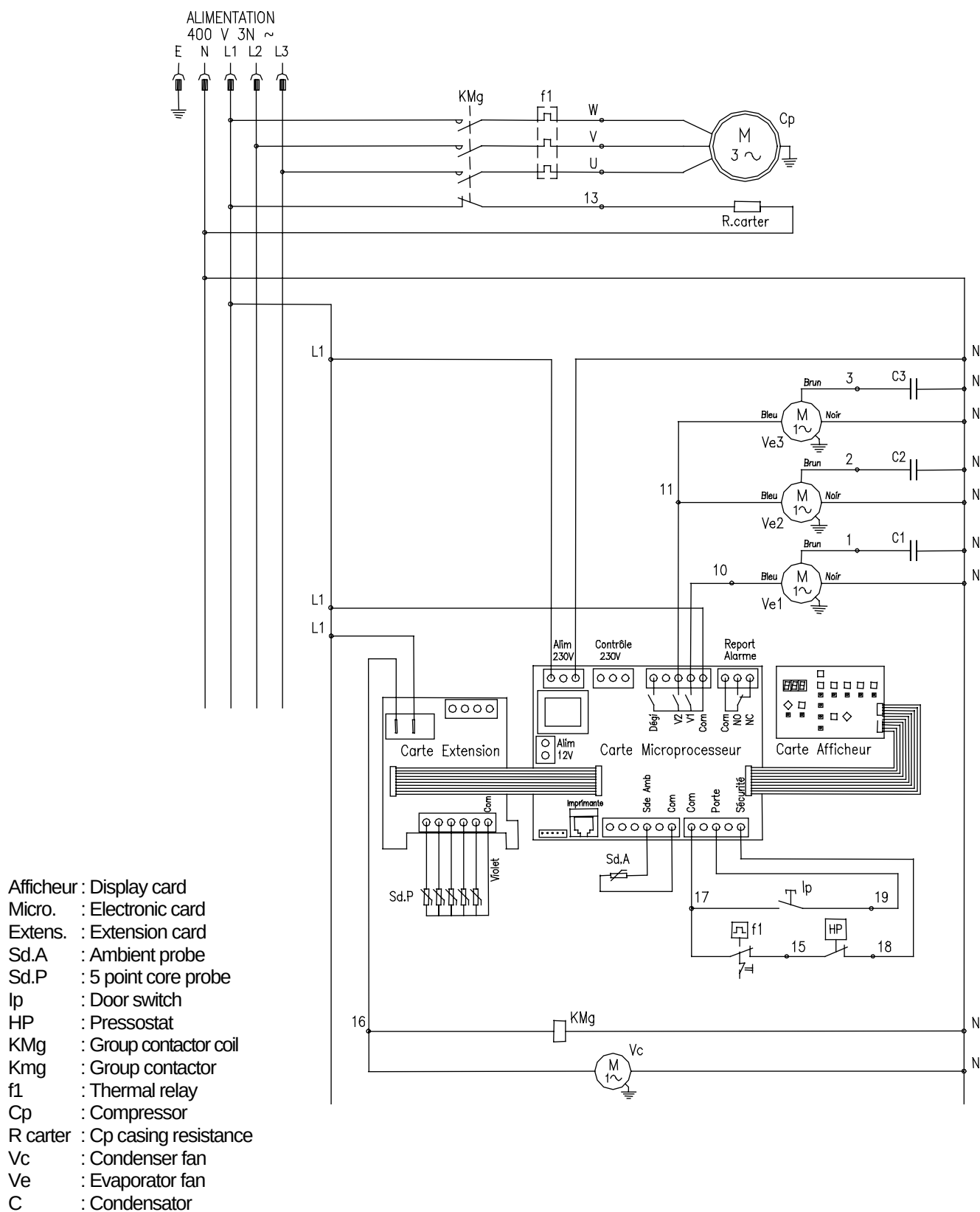
N° SE147



The installer is responsible for protecting the appliance against overloads or electrical defects.

5.3 PRINCIPLE DIAGRAM FOR MI 10

N° SE148



The installer is responsible for protecting the appliance against overloads or electrical defects.

6. SPARE PARTS

6.1 CASING

MI 3	MI 6	MI 10	Code	Designation
●			S941P54	Insulated door with hinges, without handle 728x378
	●		S942P54	--- " --- 728x778
		●	S943P54	--- " --- 728x1123
●			S217P11	Magnetic seal 689x364
	●		S218P11	--- " --- 689x764
		●	S219P11	--- " --- 689x1109
●	●	●	S085P01	Delrin door hinge
●	●	●	S058P02	Inferior hinge brace washer
●			S280P11	Door handle label H.378
	●		S279P11	--- " --- H.778
		●	S278P11	--- " --- H.1123
●	●	●	S465P42	stainless control panel grid support (door lower part)
●	●	●	S467P42	Door hinge support
●	●	●	S053P12	Door hinge bearing
●	●	●	S061P02	Slides support brace axis
●			S630PM42	Stainless slides support brace H. 328
	●		S630PN42	--- " --- H. 728
		●	S630PO42	--- " --- H. 1073
●	●	●	S062P02	Slides support alu axis
●			S631PM42	stainless slides support H.315, 3 levels pitch 80
	●		S632PM42	--- " --- H.715, 6 levels pitch 100
		●	S633PM42	--- " --- H.1060, 10 levels pitch 100
●			S631PN42	Probe support slides support H.315, 3 pitch 80
	●		S632PN42	--- " --- H.715, 6 pitch 100
		●	S633PN42	--- " --- H.1060, 10 pitch 100
●	●	●	S070P02	Black plastic feet
○	○	○	S129P02	Caster with brake
○	○	○	S130P02	Caster without brake
○	○	○	S159P11	caster brace
●	●	●	S016P12	50mm thrust (rubber)
●	●	●	S372P68	Water collection tray runners
●	●	●	S399P11	Water collection tray
●			S764P42	Evaporator fan support (part) H. 320
	●		S765P42	--- " --- H. 720
		●	S766P42	--- " --- H 1065

CASING (2nd part)

MI 3	MI 6	MI 10	Code	Designation
	●		S646P42	Condenser fan support (part) Ø 310
		●	S647P42	--- " --- Ø 380
●	●	●	S020P12	Rubber fan support plate hinges
●	●	●	S059P02	Evaporator fan support plate hinges alu washer
●	●	●	S060P02	Fan support plate hinges alu pin
●	●	●	S058P03	Triangle button screw for support plate fixing
●			S369P68	Evaporator rubber bib H. 70
	●		S370P68	--- " --- H. 90
		●	S371P68	--- " --- H. 105
●			S391P45	Control panel grid H. 330
	●	●	S393P45	--- " --- H. 510
●	●	●	S395P45	Display card casing
●	●	●	S228P02	Display card nylon brace
●	●	●	S416P42	Door contact switch fixing plate

6.2 REFRIGERATING ELECTRIC COMPONENTS

MI 3	MI 6	MI 10	Code	Designation
●			S080P40	Compressor CAJ2464Z
	●		S081P40	---"--- TFH2511Z
		●	S088P40	---"--- TAG2516Z
●			S136P40	Casing resistance CAJ
●			S057P30	Condenser 104270
	●	●	S072P30	---"--- 3N18T-45 (plan 670516)
●			S073P40	Condenser fan 25W / 254 31°
	●		S075P40	---"--- 25W / 300 23°
		●	S068P40	---"--- A350 4PL30
●			S240P46	Fan venturi 25W / 254 31°
	●		S646P42	---"--- 25W / 300 23°
		●	S647P42	---"--- A350 4PL30
●			S118P40	Bottle 0.7 litres
	●	●	S119P40	---"--- 2.2 litres
●			S022P20	Dryer 30gr XH9
	●		S018P20	---"--- DN083S 3/8"
		●	S016P20	---"--- DN0166S 1/2"
	●	●	S032P20	KP5 Pressure sensitive switch

REFRIGERATING ELECTRIC COMPONENTS (2nd part)

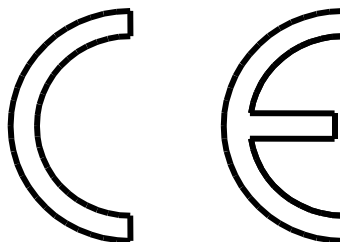
MI 3	MI 6	MI 10	Code	Designation
●			S003P30	Evaporator 6N10T plan 670501
	●		S004P30	---"--- 4N25T plan 670502
		●	S005P30	---"--- 4N38T plan 670503
●	●	●	S126P20	Expansion valve TES2 R404A ref.068-3411
●			S137P20	Nozzle n°2
	●		S138P20	---"--- n°3
		●	S139P20	---"--- n°4
●	●	●	S162P15	Evaporator fan W2E250-CB05
●			S862PA54	Electric box set MI 3
	●		S863PA54	---"--- MI 6
		●	S864PA54	---"--- MI 10
●			S896PA54	Control panel set MI 3
	●	●	S898PA54	---"--- MI 6, MI 10
●	●	●	S102P15	Compressor contactor LC1D1210M7
	●	●	S076P15	LA1DN11 Auxiliary contact
	●		S100P15	Thermal relay LR2D1310
		●	S115P15	---"--- LR2D1314
●	●	●	S295P11	Control panel Lexan label
●	●	●	S196P20	Electronic regulation cards set
●	●	●	S198P20	Regulation microprocessor card
●	●	●	S199P20	Regulation extension card
●	●	●	S197P20	Regulation front card
●	●	●	S194P20	Ambient probe
●	●	●	S200P20	5 point core probe
●	●	●	S201P20	Core probe connector
●	●	●	S199P15	Door contact reed switch
○	○	○	651168	Printer
○	○	○	651169	Printer supply card

BONNET

DECLARATION DE CONFORMITE

CONFORMITY DECLARATION

HERSTELLERKONFORMITÄTSERKLÄRUNG



TYPE / TYPE / TYP :

N° DE SERIE / SERIAL N° / FAB Nr :

Cet appareil est conforme aux dispositions de la directive « Basse tension » 73/23/CEE et de la directive « Compatibilité électromagnétique » 89/336/CEE.

This appliance complies with the provisions of the low voltage directive EEC/73/23 and with the provisions of the electromagnetic compatibility directive EEC/89/336.

Dieses Gerät entspricht nach den Bestimmungen der niederspannung-richtlinie EWG/73/23 und den Bestimmungen der elektromagnetischen Übereinstimmung-richtlinie EWG/89/336.

Il est également conforme aux dispositions de normes européennes harmonisées suivantes :

It is in compliance with the following harmonized standards :

Und entspricht ebenfalls der folgenden Europäischen Norme :

- EN 60335 - 1

Sécurité des appareils électrodomestiques et analogues

Safety of household and similar electrical appliances

Elektrische Geräte für den Hausgebrauch und ähnliche Zwecke

DIRECTION GENERALE

Général Manager

Betriebsleiter

H. GIRAUD

FORM055A1/1